XXXIV.—*Descriptions of new Species of Birds from the Solomon and Banks's Groups of Islands.* By G. R. Gray.

A collection of birds that had been obtained among the various islands of the Pacific Ocean by Julius Brenchley, Esq., a series of which he has presented to the British Museum, enables me to select several species as new to the Solomon and Banks's groups. The avifauna of the Solomon Islands was ably treated by Mr. Sclater at a meeting of the Zoological Society held on the 11th February 1869; and the paper appeared in the 'Proceedings' for the same year. This collection containing several species hitherto undescribed induces me to give descriptions of them, and thus assist towards completing the ornithological knowledge of these islands.

Accipiter albogularis.

Male. The upper surface plumbeous black tinted with grey; the base of the feathers on the hind head white; the entire surface beneath the body also white, but irrorated with plumbeous on the chest and thighs.

Length 17″ 6‴, wings 10″, bill 1″ 1‴, tarsi 2″ 4‴.

This bird, of which there is only a single specimen, might at first sight be taken for the *Accipiter haplochrous* of New Caledonia; but it is larger and possesses a white throat, which at once distinguishes it from the latter-mentioned species. It was obtained at Hada or Recherche Bay, San-Christoval Island.

Philemon Sclateri.

Female. Above brown, with an olive tinge; rump and tail dull rufous brown, each feather of the latter margined with yellowish olive; wings fuscous black, with the outer margins of quills yellowish olive, especially of the tertials; top and sides of head fuscous black, each feather broadly margined on its sides with yellowish white; throat white, tinged with grey, with a broad line of black on each side, proceeding from the ears; breast white, with black dashes down the middle of each feather, the black fading into brown on the upper part of the abdomen. Bill yellowish white; feet plumbeous.

Length 11″, wings 5″ 6‴, bill 1″ 6‴, tarsi 1″ 4‴.

"Eyes dark brown. Contents of stomach honey."

A single specimen only is in the collection, which was obtained at Wanga, San-Christoval. This bird was recorded by Mr. Sclater, in his list of Solomon-Islands birds, under the name of *Philemon vulturinus* (Homb. & J.). Through the kindness of that gentleman, I am enabled to rectify, by com-

parison, this error, which was entirely occasioned by the wretched state of the specimen he had under examination.

Ptilonopus solomonensis.

Female, young. Bright golden emerald-green; quills bluish black, with the tips dark shining green; tertials emerald-green, all narrowly margined with yellow; abdomen and under tail-coverts bright king's-yellow.

Length 8″, wings 5″, bill 9‴, tarsi 6‴.

"Eyes yellow. Contents of stomach large seeds and fruits."

The single specimen of this bird was also procured at Wanga, San-Christoval. It is probable that the mature male of this species, when obtained, may prove to possess a showy plumage, as is the case with most of the species.

Carpophaga Brenchleyi.

Front of head greyish white, with the hind head grey; cheeks and throat pale castaneous; upper surface plumbeous black, tinged with grey; tail above, when closed, black, with the outer feathers, when expanded, and beneath all the feathers rufous castaneous; beneath the body of a very dark rufous castaneous, shading into a lighter colour on the lower abdomen and under tail-coverts.

Length 16″, wings 8″ 9‴, bill 1″ 2‴, tarsi 1″.

"Eyes yellow. Contents of stomach large seeds and fruits. Male."

This fine bird, of which there is only a single specimen, was collected at Wanga, San-Christoval, where it feeds on various kinds of seeds, amongst which are those of a species of *Canarium*. The soft pulp that surrounds the hard shell wherein the seed is placed must be the portion that nourishes the bird during the period they can be obtained.

Megapodius Brenchleyi.

Young. Castaneous brown, with transverse narrow bands of yellowish brown on the back and wings; throat and cheeks fulvous white; beneath the body more rufous than on the upper surface, but without any markings.

Length 5″ 6‴.

"Eyes dark hazel."

A single specimen of the young bird, and two eggs (unfortunately in a broken state) were obtained at Gulf Island, where they were discovered in the month of September 1865. These eggs are, both in size and colour, very similar to that of *Megapodius Brazieri*, described by Mr. Sclater in Proc. Zool.

Soc. 1869, p. 528. In 1864, I observed, in the Proc. Zool. Soc. p. 42, that an egg (very similar in every respect to those above referred to) had been brought from San-Christoval Island. As Gulf Island lies close to this last-mentioned island, it is therefore very probable that the birds of these two islands may eventually prove to be of one and the same species.

I have named these two species after Julius Brenchley, Esq., as a small acknowledgment for the opportunity he has given me of describing the new species contained in his highly interesting collection.

Mr. Sclater, in his paper (Proc. Zool. Soc. 1869) previously referred to, has given (p. 124) a list of the species then known to inhabit the Solomon Islands; to which list I have also the means of adding, through this collection, the following additional species :—

Cuncuma leucogaster. St.-Isabel and Cocatoo Islands.
"Eyes brown. Contents of stomach pigeon." Young.

Haliastur leucosternon. Ugi or Gulf Island.
"Eyes dark brown. Contents of stomach Crustacea."

Collocalia hypoleuca. Ugi or Gulf Island.
"Eyes black. Contents of stomach *very* small insects."

Halcyon albicilla. San-Christoval Island.
"Eyes black. Contents of stomach small Crustacea. Male."

Electus Linnæi. St.-Isabel Island.
"Eyes red. Contents of stomach small fig-seeds."

Electus intermedius. St.-Isabel Island.
"Eyes dark brown. Young female."

Mr. Sclater seems to have overlooked his species *Cacatua ophthalmica*, which he has stated is from this group of islands.

This collection also contains four species of birds that had been obtained at Vanua Levu, which forms one of the islands of Banks's group. I am thus able to record two new species and two other previously known species as inhabitants of this group of islands.

Lalage Banksiana.

Top of the head, back, part of wings, and a transverse pectoral band black; lore, eyebrows, sides of head, and throat pure white; beneath the body, part of great wing-coverts, tertials, rump, and tail buffy white; the latter has the middle feathers mostly, and outer margins of the others more or less black.

Length 6″, wings 3″ 3‴, bill 10‴, tarsi 10‴.

" Eyes black. Contents of stomach insects. Male and young male."

Rhipidura spilodera.

Fuscous black; eyebrows white; throat and breast white, each feather marked in the middle with black; abdomen pale fulvous white; quills dark fuscous black; tail fuscous black, with the tips and inner margins white.

Length 7″, wings 3″, bill 7‴, tarsi 12‴.

" Eyes black. Contents of stomach insects. Female."

This bird, of which there is only one example, is like *Rhipidura pectoralis*, Homb. & Jacq., of the island of Vanikoro; but the spots on the breast extend up to the mentum.

With the two preceding species the following were also obtained:—

Myiagra melanura.

" Eyes dark brown. Contents of stomach insects. Young male."

Trichoglossus Massenæ.

" Eyes red. Contents of stomach honey. Young male."

Mr. Sclater has recorded that an egg of a Megapode which he has described, under the name of *Megapodius Brazieri*, in the Proc. Zool. Soc. 1869, p. 528, had been found and brought from the Banks's group. Mr. Brenchley's collection contains three specimens of eggs of a Megapode that were obtained at Vanua Levu, two of which are similar in colour and size to that described by Mr. Sclater; but the third example is a dirty white. Mr. Brenchley has a note in reference to them, that they were found in the vicinity of the hot springs on the mountains during the month of August 1865.

The neighbouring group of islands, the New Hebrides, is also the abode of a species of Megapode; and we are told by Capt. M'Leod that they are found abundantly, especially on Tanna and Sandwich Islands. Both these islands are also referred to by Mr. Brenchley, who remarks that on the first-mentioned island a large bird is spoken of as living in the vicinity of the Vulcanos; while in the second island eggs of a Megapode had been offered for sale.

It may be remarked that the mature state of the bird of both these groups of islands is at present unknown to ornithologists.

Another new species from the New-Hebrides group is also

worthy of being added to these descriptions, as it is also contained in the same collection :—

Glyciphila flavotincta.

It is very like *Glyciphila modesta*, G. R. G., of New Caledonia; but it is rather larger in all its proportions, and it has a prominent tinge of yellow on the back and beneath the body, which is not found on the bird referred to.

Length 6″, wings 3″ 3‴, bill 12‴, tarsi 10‴.

"Eyes black. Contents of stomach honey. Male and female."

Three specimens were obtained at Erromango Island.

XXXV.—*On Fertilization in Ferns.*

By Dr. Edward Strasburger*.

The author affirms that he is enabled, by a series of observations on the prothallia of *Pteris serrulata* and *Ceratopteris thalictroides*, to correct certain errors of previous observers as to the way in which fertilization is effected in Cryptogams, and considers that the results attained by him in these instances are calculated to throw a new light on the whole subject. He commences the account of his experiments by tracing the development of the antheridia, or cells producing the spermatozoids, from their earliest condition, and states that the growth of their lateral cells presents the first example of annular-cell formation by division in the vegetable kingdom—a fact brought to notice by Dr. L. Kny in a paper communicated to the Society of the Friends of Natural History in Berlin, in November 1868†. After detailing step by step the growth of the cells in an antheridium, Dr. Strasburger observes that the new twin cells, viz. the central cell and the annular lateral cells, are distinguished from ordinary cells by the difference of their contents, the inner one being stuffed with granular protoplasm, the outer ones containing, at first, an almost colourless sap, with a single, scarcely discernible nucleus, and a few scattered grains of chlorophyll. He then describes the formation of the cells producing the spermatozoids in the following manner :—

Pteris serrulata presents several forms of antheridia: in young prothallia they are commonly unicellular, in older ones

* From Pringsheim's 'Jahrbücher für wissenschaftliche Botanik,' vii. Band, 3tes Heft. Communicated by C. E. Broome, F.L.S. &c.

† "Ueber den Bau und die Entwicklung des Farm-Antheridiums." Berlin, 1869. (Ann. Nat. Hist. p. 233 of the present volume.)